

ABSTRACT

An internal power supply circuit for a semiconductor integrated circuit includes two constant voltage generators having identical circuit topologies but generating two different constant voltages from an external power supply voltage. The lower constant voltage is selected when the external power supply voltage is below a predetermined level, the higher constant voltage is selected when the external power supply voltage is above the predetermined level, and an internal power supply voltage is generated from the selected constant voltage. The internal power supply voltage is stable over a wide flat region, but can also be raised to a higher level for stress testing of the semiconductor integrated circuit, and the higher level is also stable.